

## **JP 444592**

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### **Heat sensitive recording sheet - comprises dye, developer, and binder**

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Patent Family ( 2 patents, 1 countries )

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
JP 61092890	A	19860510	JP 1984213781	A	19841012	198625	B
			JP 1984220048	A	19841018		
JP 1992044592	B	19920722	JP 1984213781	A	19841012	199233	E

Patent Details					
Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
JP 61092890	A	JA	4	0	
JP 1992044592	B	JA	4	Based on OPI patent	JP 61092890

**Alerting Abstract JP A**

Heat-sensitive recording sheet contains (a) colourless or pale-coloured dye precursor, (b) developer developing (a) under heating, (c) binder consisting of water-soluble polymer and (d) ester cpd. of (d1) boric acid or lower alcohol triborate with (d2) two or more kinds of polyhydric alcohol having adjacent OH gp. in (A) a heat-sensitive colour-forming layer.

Cpd. (d1) is, e.g. trimethyl borate, tripropyl borate or triisopropyl borate. Cpd. (d2) is, e.g., ethylene glycol, tripropyl borate or tributyl borate. Dye (a) is e.g., triphenylmethane series, fluoran series, diphenylmethane series, thiazine series or spiropyran series cpds. Cpd. (b) is e.g., phenol, naphthol, 4,4'-isopropylidene diphenol or methyl p-hydroxybenzoate. Binder (c) is a water-soluble binder or latex series water-insoluble binder.

USE/ADVANTAGE - Cpd. (d) is very compatible with water-soluble polymer cpds. and imparts proper viscosity and makes the surface of the hydrophobic substance in (A) hydrophilic. This improves the adhesiveness of (A) to the support. The heat-sensitive recording sheet has improved adhesive force, improved water resistance and is prevented from piling, sticking, blocking and dusting. The recording sheet is useful for various printer, facsimile, per cord label, tickets, etc..

**Title Terms** /Index Terms/Additional Words: HEAT; SENSITIVE; RECORD; SHEET; COMPRISE; DYE; DEVELOP; BIND

**Class Codes**

## International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
B41M-005/26			Main		"Version 7"
B41M-005/18			Secondary		"Version 7"

File Segment: CPI; EngPI

DWPI Class: E12; E14; E24; G05; P75

Manual Codes (CPI/A-N): E05-C; E10-E04H; G06-A01; G06-F08

**Chemical Indexing**

Derwent Registry Numbers: 0470-U; 0566-U; 0689-U; 0822-U; 0868-U; 1110-U; 1894-U

Chemical Fragment Codes (M3) :

\*01\* M903 B105 B405 B713 B720 B803 B831 C101 C108 C800 C802 C804 C805 C807  
 M210 M211 M212 M213 M214 M215 M216 M220 M221 M222 M231 M232 M233 M272  
 M283 M320 M411 M510 M520 M530 M540 M620 M730 M782 Q339 R023 R043  
 \*02\* M903 H4 R402 H403 R404 R405 R482 R483 R484 H8 M280 M312 M313 M314 M315  
 M321 M331 M332 M333 M342 M343 M344 M383 M391 M416 M620 M730 M782 Q339  
 R023 R043

Derwent Chemistry Resource Numbers: (Linked) 11030-USE; 134460-USE; 1665-USE; 181-USE; 21-USE;

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#### **THERMAL RECORDING SHEET**

Assignee: MITSUBISHI PAPER MILLS LTD (MITY)

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